From: <u>Jon Rauscher</u>

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**Subject:** NOAA - National Oceanic and Atmospheric Administration - Ocean

**Date:** 06/24/2010 10:54 AM

http://www.noaa.gov/sciencemissions/bpoilspill.html

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#### **Related Links**

GeoPlatform.gov

NOAA's Response to
Deepwater Horizon BP Oil
Spill

Deepwater Horizon Information Resources [PDF]

# **NOAA Science Missions & Data**

# Deepwater Horizon/BP Oil Spill

"As the lead science agency for oil spill response, and as stewards of our oceans and coasts, NOAA is extremely concerned about the health of the Gulf of Mexico and the well-being of the millions of people who depend on these waters for their livelihoods and pleasure. The most important thing NOAA can do is bring the absolute best science to inform the ongoing response and recovery efforts."

-Jane Lubchenco, NOAA Administrator

GeoPlatform.gov is a one-stop shop for detailed near-real-time information and data about the response to the Deepwater Horizon/BP oil spill.

NOAA's response has been immediate and sustained, strategic and scientific.

From day one, NOAA has been tracking every aspect of this spill: where the oil is going on the surface and under the sea, and what the consequences are to coastal communities, wildlife and the marine environment. We are bringing all scientific methods to this task:

- Satellites in space
- · Planes in the air
- Boats on the water
- Gliders below the surface
- Scientists on the ground



Screen shot from GeoPlatform.gov.

(Credit: NOAA)

### **NOAA Data Index**

# Seafood/Fisheries Monitoring Data

- Daily Federal Fisheries Closure and Other Information
  - July 22, 2010 One-Third of Closed Gulf Fishing Area Reopened
     Letter to the U.S. Food and Drug Administration with rationale for reopening

Sample Locations 1
Sample Locations 2
Seafood Testing Data 1
Seafood Testing Data 2
Explanation of Seafood Testing Data
Map of Reopened Area

- Gulf Seafood Baseline Data (2005-2006) [CSV]
- Gulf Seafood Baseline Data (June 2010) [CSV]
- Explanation of Baseline Chemistry Data [PDF]

# Subsurface Oil Monitoring and Ocean Current Data

Data collected in the Gulf is being catalogued and posted on NOAA's National Oceanographic Data Center.

### **Subsurface Oil Monitoring**

- <u>Data from NOAA and partner ships</u>, including the NOAA Ships Gordon Gunter and Thomas
   Jefferson and research vessels Walton Smith, Brooks McCall, Bunny Bordelon, Jack Ftiz and Ocean
   Veritas
- Additional NOAA Ship Gordon Gunter Mission Data
- Analytical Chemistry Data from the R/V Brooks McCall.
  - o Data Dictionary [xls]
  - o Brooks McCall Cruise 1- May 8, 2010 [xls] | Metadata [pdf]
  - o <u>Brooks McCall Cruise 2 May 15, 2010</u> [xls] | <u>Metadata</u> [pdf]
  - O Brooks McCall Cruise 3 May 19, 2010 [xls] | Metadata [pdf]
  - O Brooks McCall Cruise 4 May 23, 2010 [xls] | Metadata [pdf]
  - o Brooks McCall Cruise 5 May 30, 2010 [xls] | Metadata [pdf]
- See Joint Anaylsis Group section below for analysis of subsurface data

#### **Ocean Currents**

- NOAA P3 Aircraft Loop Current Monitoring Flights XBTs data
- Temperature and Salinity Data from Nine Gliders
- Eleven Floats Current location of floats and CTD data
- Center for Operational Oceanographic Products and Services (CO-OPPS)
- Tide and Current Information
- Integrated Ocean Observing System (IOOS)
- Historical Ocean and Current Data for Gulf of Mexico
- Daily surface oil trajectory map

# Natural Resource Damage Assessment (NRDA) Data

As of Thursday, July 8, 2010, the Deepwater Horizon MC252 Resource Trustees agreed to publicly post NRDA 'Pre-assessment' science data once it is collected, analyzed, and properly quality checked, following the U.S. government's existing Information Quality Act. Releasing NRDA 'Pre-assessment' science data is rarely done in the NRDA process, but it was decided in the interest of transparency, and because of the heightened interest in this particular spill, that this information would be made public.

Information Quality Act statement for NRDA collected data [pdf]

The data below represent analytical chemistry results for water samples collected on Jack Fitz Cruise 1.

- Jack Fitz Cruise 1 May 10, 2010 [xls] | Metadata [pdf] | Data Dictionary [pdf]
  - O Data Validation Report P.I.A.N.O. Volatile Organic Compounds July 9, 2010 [pdf]
  - O Data Validation Report P.I.A.N.O. Volatile Organic Compounds July 19, 2010 [pdf]
  - O Data Validation Report PAH & Alkylated Homologs by GC/MS-SIM July 20, 2010 [pdf]
  - Data Validation Report PAH & Alkylated Homologs by GC/MS-SIM July 23, 2010 [pdf]
  - O Data Validation Report Aliphatic Hydrocarbons by GC/FID July 23, 2010 A [pdf]
  - O Data Validation Report Aliphatic Hydrocarbons by GC/FID July 23, 2010 B [pdf]

### Air Quality Data

- June 8-10 NOAA Air Quality Mission
- Daily Atmospheric Trajectory Map for Gulf of Mexico

# Satellite Data and Imagery

- Satellite Data: Deepwater Horizon Support
- NOAA Remote Sensing Division imagery of the Gulf Coast following the Deepwater Horizon Incident

- Oil Spill Imagery
- Satellite Derived Surface Oil Analysis Products
- NOAA Satellite and Information Service products and operations involved in response to Gulf of Mexico oil spill
- Daily SST Climatologies
- Ocean Surface Topography

# Inter-Agency Joint Analysis Group (JAG)

This interagency panel, comprised of scientists from NOAA, EPA, and the White House Office of Science and Technology Policy, was created to coordinate information about subsurface sampling related to the Deepwater Horizon/BP oil spill.

Administration's Joint Analysis Group Releases First Scientific Report on Subsea Monitoring data from Gulf Spill – A peer-reviewed, inter-agency report about *Brooks McCall* subsurface monitoring near the Deepwater Horizon wellhead, May 8-25, released on June 23. Full Report [PDF]; News Release

Second Federal Analysis Gives Further Clues about Location and Movement of Subsurface Oil - A peer-reviewed, inter-agency report about subsurface monitoring near the Deepwater Horizon wellhead based on data collected by the R/V Brooks McCall, R/V Ocean Veritas, R/V Walton Smith, NOAA Ship Thomas Jefferson and NOAA Ship Gordon Gunter, May 19-June 19, released on July 23. Full Report [PDF]; News Release

**Data Supplement to Joint Analysis Group Report 2** - The Joint Analysis Group Report 2 published on July 23, 2010 reported on data collected between May 19 and June 19, 2010. This supplement extends those data to July 13, 2010. The figures in this supplement should be interpreted in the context of the July 23, 2010 report. **Supplement Report** [PDF]

Instrument drift check procedures for CDOM Fluorometers at the Deepwater Horizon Site - This quick-response, time sensitive data report presents guidance for at sea operations. The report contains the JAG recommendation for best practices for checks against instrument drift for WetLabs Eco CDOM Instruments. Full Report [PDF]

# **NOAA Science Missions**

# **NOAA Ships**

### NOAA Ship Henry B. Bigelow



Mission 1 (July 29-ongoing)

NOAA Ship *Henry B. Bigelow* is supporting the Deepwater Horizon/BP wellhead integrity monitoring effort using its sophisticated acoustic echosounders to monitor for oil and gas releases the vicinity.

## NOAA Ship Delaware II



#### Mission 1

To collect tunas, swordfish and sharks to gather data about the conditions these highly migratory species are experiencing in waters around the Gulf of Mexico spill site.

### Links

Press Release: NOAA Ship Delaware II to Collect Tunas, Swordfish, Water Samples on Deepwater Horizon Spill Study

### NOAA Ship Oregon II

#### Mission 1

Surveying reef fish, bottom-dwelling fish, and shrimp in the eastern and western Gulf of Mexico to sample for



seafood and water quality and species abundance as part of the oil spill response.

#### Links

Press Release: <u>Mississippi Teacher Sails In Gulf of Mexico Aboard NOAA</u>
<u>Ship Oregon II</u>

#### **NOAA Ship Pisces**



Mission 1 (June 2 - July 2, 2010)

Surveying reef fish, bottom-dwelling fish, and shrimp in the eastern and western Gulf of Mexico to sample for seafood and water quality and species abundance as part of the oil spill response.

#### Links

Press Release: Missouri Teacher Sails in Gulf of Mexico Aboard NOAA Ship Pisces

Press Release: Alabama Teacher Sails in Gulf of Mexico Aboard NOAA

### Ship Pisces

#### Mission 2 (July 14 - ongoing)

NOAA Ship *Pisces* is supporting the BP Deepwater Horizon wellhead integrity testing effort. The 209-ft. ship is using sophisticated echo-sounders to monitor for oil and gas releases in the immediate vicinity of, and directly over, the well head. Data from the mission are currently being analyzed by the National Incident Command, NOAA and the University of New Hampshire.

### NOAA Ship Nancy Foster



Mission 1 (June 29-July 18)

To better understand the loop current and how it may change over time, as well as to sample planktonic animals potentially affected by the spill. .

#### Links

Press Release: NOAA Sends Two Ships to Study Loop Current and Coastal Florida Waters

Mission 2 (July 21-Aug. 8)

NOAA Ship Nancy Foster is using a remotely operated vehicle to monitor

deep-water bottom habitats that have been exposed to the oil/dispersant mixtures from the Deepwater Horizon/BP incident, investigating what impacts may have occurred at this stage of the spill. Researchers will visit areas in the northern Gulf of Mexico that have been previously sampled as well as go to new areas to collect baseline samples on deep-water corals and associated marine life in the Gulf.

### **NOAA Ship Gordon Gunter**



Mission 1 (May 27 - June 4, 2010)

Researchers took water samples and tested advanced methods for detecting submerged oil. They also conducted plankton tows and surveys of fish larvae.

#### Partners

University of New Hampshire, the Monterey Bay Aquarium Research Institute, University of South Florida, U.S. Coast Guard, U.S. Environmental Protection Agency

### Links

Press Release: NOAA Research Ship Gordon Gunter Expands Gulf Mission

Mission Report: NOAA Ship Gordon Gunter Mission Summary [PDF]

Report: MBARI AUV Preliminary data report [PDF]

Mission 2 (June 14 - Aug. 4, 2010)

NOAA Ship *Gordon Gunter* is studying sperm whales and other marine mammals to learn more about how they are affected by the oil spill. It will be tracking their abundance and distribution both with visual surveys and by recording sounds using an array of underwater microphones. The ship also monitored for the presence of oil and gas near the wellhead as part of the Unified Command's wellhead integrity testing.

#### Links

Press Release: <u>NOAA and University Scientists Launch Research Cruise to Determine Effects of Oil Spill on Endangered Whales</u>

#### **Partners**

Cooperative Institute for Marine and Atmospheric Studies (University of Miami)

### NOAA Ship Thomas Jefferson



Mission 1 (June 3 - 11, 2010)

Researchers took water samples and tested advanced methods for detecting submerged oil while gathering oceanographic data in the area's coastal waters.

#### **Partners**

University of New Hampshire Center for Coastal and Ocean Mapping, Woods Hole Oceanographic Institution

#### Links

Press release: Initial Observations from the NOAA Ship Thomas Jefferson

Mission Report: NOAA Ship *Thomas Jefferson* Deepwater Horizon Response Mission Report- 6/11/2010 [PDF]

Podcast: Commanding Officer Shep Smith describes mission and sampling tools on board NOAA Ship Thomas Jefferson.

### Mission 2 (June 15 -July 2, 2010)

Researchers will use sophisticated acoustic and water chemistry monitoring instruments to detect and map submerged oil in coastal areas and in the deep water surrounding the BP well head. The ship also will take water chemistry measurements and samples in the vicinity of <a href="Flower Garden Banks National Marine Sanctuary">Flower Garden Banks National Marine Sanctuary</a>, and collect air samples in the areas around the well head and downwind of the spill site.

#### **Partners**

NOAA-University of New Hampshire Joint Hydrographic Center

#### Links

Press Release: NOAA Ship Thomas Jefferson Continues Deepwater Horizon Spill Study Mission

Mission Summary: NOAA Ship *Thomas Jefferson* Deepwater Horizon Response Mission Summary - 7/2/2010 [PDF]

Mission Report: NOAA Ship *Thomas Jefferson* Deepwater Horizon Response Mission Report Interim Project Report-Leg 3, June 15-July 1, 2010 [PDF]

# Non-NOAA Ships

# **Ocean Ecology**

#### Seward Johnson

In the eastern Gulf of Mexico to gather baseline data against which to measure change if oil from the Deepwater Horizon/BP spill reaches the area.

#### **Partners**

This mission is funded by NOAA's Cooperative Institute for Ocean Exploration, Research and Technology and is led by Florida Atlantic University's Harbor Branch Oceanographic Institute and the University of North Carolina, Wilmington. Other partners include SRI

International in St. Petersburg, Fla., and the University of Miami.

#### Links

Press Release: NOAA, U.S., Brazilian Partners Send Ship to Study Corals, Water Column for Gulf Oil Spill Response

#### Seafood Safety Sampling

#### Beau Rivage

In the closed fishing zone in the eastern Gulf, using bottom longline gear to catch fish for seafood safety samples.

#### Gandy

Conducting a vertical line survey in the eastern Gulf, collecting seafood safety samples.

#### Caretta

Trawling and plankton work in the oiled area off Mississippi, collecting seafood safety samples.

#### **Subsurface Oil Detection**

#### Pelican

### Mission 1 (May 2 - 16, 2010)

Bottom sediment sampling and water column work. Water sampling, new sensors including a Wetlabs fluorometer intended to detect oil at depth.

#### **Partners**

Owned by Louisiana Universities Marine Consortium

Mission 2 (May 16 - 24, 2010)

Examining hydrographic, chemical and biological properties and taking water and sediment samples for analysis of oil content.

#### **Partners**

Dr. Nancy Rabalais of the NOAA-supported Louisiana Universities Marine Consortium

## Weatherbird II

Mission (May 22 - 28, 2010)

Mission conducting sampling to determine presence, concentration and location of subsurface oil.

### **Mission Report**

### **Partners**

University of South Florida

#### Links

Press release: NOAA Completes Initial Analysis of Weatherbird II Water Samples

# **NOAA Aircraft:**

These NOAA Aircraft have been part of the Deepwater Horizon Response

N42RF Orion (WP-3-D)

### **Mission Description**

One of NOAA's WP-3D aircraft flew regular research missions to learn more about the Gulf of Mexico Loop



Current. Sensors dropped from the plane into the ocean measured temperature and salinity to help scientists track the movement of the Loop Current. This information helps responders and officials in coastal areas all around the Gulf to better understand the likelihood of shoreline impacts.

#### **Partners**

University of Miami Rosenstiel School of Marine and Atmospheric Research

#### Links

**Mission Data** 

#### WIISSIUII Dala

### N43RF Orion (WP-3D)

#### **Mission Description**

NOAA WP-3D Orion aircraft deployed to the Gulf to help monitor air quality near the Deepwater Horizon/BP Oil Spill.

#### Links

Press release: NOAA Deploys Additional High Powered Research Aircraft to Gulf to Help Monitor Air Quality

Mission Report: Air Chemistry in the Gulf of Mexico Oil Spill Area NOAA WP-3D Airborne Chemical Laboratory Flights of 8 and 10 June 2010

**Mission Data** 

#### N46RF Twin Otter (DHC-6)

#### **Mission Description**

Marine mammal surveys, multispectral scanning/oil density-thickness.



#### N56RF Twin Otter (DHC-6)

Mission Description

Marine mammal surveys

#### N57RF Twin Otter (DHC-6)

### **Mission Description**

Marine mammal surveys

### N68RF King Air (BE-350ER)

### **Mission Description**

Coastal photography/mapping

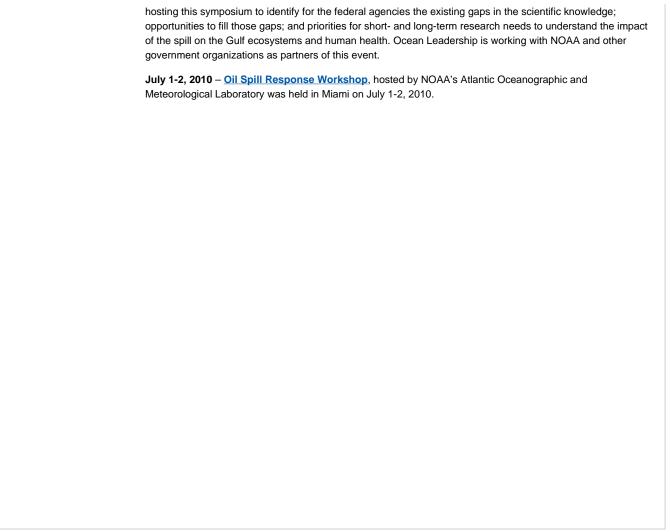
NOAA's fleet of ships and aircraft is operated by the NOAA Office of Marine and Aviation Operations.

## Science Meetings

May 27, 2010 – <u>UNH Coastal Response Research Center, NOAA, EPA and Coast Guard Convene Science Meeting</u> to Study Dispersant Use and Ecosystem Impacts of Dispersed Oil in the Gulf of Mexico.

#### June 3, 2010 - Gulf Oil Spill Scientific Symposium

The Deepwater Horizon/BP oil spill is having significant ecological impacts on the Gulf of Mexico and coastal states in the region. As the nation responds to this unprecedented spill, non-federal scientists can play a major role in the efforts to understand and combat the impacts of this spill. The Consortium for Ocean Leadership is



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